

20001002.ba v02\_n999.bam.20001002

>From ???@??? Mon Oct 2 14:36:59 2000 -0500  
Date: Mon, 2 Oct 2000 14:34:14 CDT  
From: Old Tube Radios <boatanchors@theporch.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: BOATANCHORS digest 2999  
Message-Id: <20001002193649.21A6B2C1@devel43.theporch.com>

BOATANCHORS Digest 2999

Topics covered in this issue include:

- 1) Receivers with 5.25 MC IF???  
by "ROBERT W. DOWNS" <RWDowns\_WA5CAB@compuserve.com>
- 2) Re: [MilSurplus] Receivers with 5.25 MC IF???  
by AAFRadio@erols.com
- 3) Redesigned Website is Up  
by "Jay H. Miller" <jay@kk5im.com>
- 4) Re: Buy/Trade For 1KW Johnson Transmatch  
by john <johnmb@mindspring.com>
- 5) ADMINISTRIVIA: Buying and Selling Guidelines  
by listown@jackatak.theporch.com (Mail List Owner)
- 6) For Sale  
by "Ed White" <wa3bzt@wserv.com>
- 7) Military Multimeter ME 9 H/U  
by "Jim Reynolds" <ki6up@earthlink.net>
- 8) (fwd) RU-17 coil set Range E CASE only, \$10 shipped  
by Andy Wallace <wallace@world.std.com>
- 9) FS: R390A  
by KB9VU@aol.com
- 10) WTB Mod & Driver xfmrs  
by Bob Login <jlogin@mindspring.com>
- 11) Re: Forward from BoatAnchors: "Rainchester" October 6 & 7th,  
2000.  
by Michael Crestohl <mc@sover.net>
- 12) GATHERING OF SX-42 MUSINGS  
by JOHN.SEHRING@ecunet.org

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Date: Sun, 1 Oct 2000 09:34:16 -0400  
From: "ROBERT W. DOWNS" <RWDowns\_WA5CAB@compuserve.com>  
Subject: Receivers with 5.25 MC IF???  
To: Old Tube Radios <boatanchors@theporch.com>  
Message-ID: <200010010934\_MC2-B557-536F@compuserve.com>  
MIME-Version: 1.0  
Content-Transfer-Encoding: quoted-printable  
Content-Type: text/plain;

charset=ISO-8859-1

Content-Disposition: inline

Groups,

Both the Army (BC-1032) and Navy (RBW) had panadaptors with a 5.250 MC input. All of the comparable vintage VHF receivers that I've checked the=

specs on so far have IF's of 6.something, 12 or 30 MC. Does anyone know = of

any WW-II vintage receivers, either Navy or Army, with 5.25 MC IF's?

Robert Downs

<RWDowns\_WA5CAB@compuserve.com>

Houston

-----  
Message-ID: <39D741B2.2D2C15F7@erols.com>

Date: Sun, 01 Oct 2000 09:52:50 -0400

From: AAFRadio@erols.com

MIME-Version: 1.0

To: Old Tube Radios <boatanchors@theporch.com>

CC: BOATANCHORS <boatanchors@theporch.com>, milsurplus <milsurplus@qth.net>

Subject: Re: [MilSurplus] Receivers with 5.25 MC IF???

Content-Type: text/plain; charset=us-ascii

Content-Transfer-Encoding: 7bit

"ROBERT W. DOWNS" wrote:

> Both the Army (BC-1032) and Navy (RBW) had panadaptors with a 5.250 MC  
> input. All of the comparable vintage VHF receivers that I've checked the  
> specs on so far have IF's of 6.something, 12 or 30 MC. Does anyone know of  
> any WW-II vintage receivers, either Navy or Army, with 5.25 MC IF's?

Hallicrafters S-36/S-36A, BC-787, and AN/ARR-5...all fundamentally the same receiver. Might be others.

73,

Mike

-----  
Mime-Version: 1.0

Message-Id: <p05001901b5fd0782f2ac@[199.34.24.209]>

Date: Sun, 1 Oct 2000 10:25:39 -0500

To: Old Tube Radios <boatanchors@theporch.com>

From: "Jay H. Miller" <jay@kk5im.com>

Subject: Redesigned Website is Up

Content-Type: text/plain; charset="us-ascii" ; format="flowed"

October 1, 2000

My newly redesigned website is now up and running at:

<http://www.kk5im.com>

Please take a look as there is something there for just about everyone...Boatanchors, Collins, Hammarlund, Tech Library, Drawings, stuff about other interests of mine as well.

Also, if you have my old page linked, please note the new URL.

Thanks!

73

--

\*\*\*\*\* jay@kk5im.com \*\*\*\*\*  
Jay H. Miller, KK5IM Dallas, Texas  
The Pocket Guide to Collins Amateur Radio Equipment  
A Pictorial History of Collins Amateur Radios  
ARRL \* AMI#846 \* DXCC  
NEW Home Page: <http://www.kk5im.com>  
\*\*\*\*\* Proud to be 100% Macintosh since 1984! \*\*\*\*\*

-----  
Message-Id: <3.0.3.32.20001001114817.00d93cb0@mindspring.com>

Date: Sun, 01 Oct 2000 11:48:17 -0400

To: Old Tube Radios <boatanchors@theporch.com>

From: john <johnmb@mindspring.com>

Subject: Re: Buy/Trade For 1KW Johnson Transmatch

Cc: "boatanchor message" <boatanchors@theporch.com>

Mime-Version: 1.0

Content-Type: text/plain; charset="us-ascii"

At 04:04 PM 9/30/00 -0700, Don Ehrlich wrote:

>> I believe you are mistaken. The 275 watts was for carrier output to the  
>> tuner and the PEP would be 4Xcarrier output watts.

>

>I don't think so. The manual is not specific on this at all ... until you  
>read the body of the text where it states "275 watts input power to the  
>final amplifier." It implies that the 275 watt unit is for rigs up to and  
>including the Valiant, and the 1 KW unit is for the bigger Johnson rigs.

>

Hi Don,

I think the conservative approach is always good with old gear...  
but for grins, it might be good at your next opportunity to look  
at the insides of a MFJ "2KW" tuner and compare it to that inside

the little Matchbox... interesting how marketing can conquer physics!  
:-)  
73  
John

-----  
Message-Id: <200010011615.e91GF1702838@jackatak.theporch.com>  
From: listown@jackatak.theporch.com (Mail List Owner)  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: ADMINISTRIVIA: Buying and Selling Guidelines  
Date: Sun, 1 Oct 2000 11:15:01 CDT

Gang-

This periodic posting is intended as a gentle nudge and suggestion which should improve the quality of posts to the BoatAnchors list, and maintain our excellent (and high) signal to noise ratio...

The list culture has developed to include "for sale" and "wanted" posts. Originally, all buying and selling traffic was focused on finding parts to complete a restoration. As the list has evolved, there has been an increase in buying and selling activity, which may not be all bad.

There is, however, a real need to observe certain conventions, lest this otherwise benign activity turn into a real disturbance to the real purpose of the list: discussions of radio equipment using vacuum tubes, including the life and times of the designers and users of such gear.

Please observe these guidelines:

There is never a reason for an auction post or update on the Boatanchors List... comments about gear at auction elsewhere are noise, and those who would care already visit the auction sites, and those who do not frequent the auctions do not want to hear about it... simple policy

- 1) LIMIT the frequency of for sale postings... once a month is a good starting point
- 2) DO NOT post endless "xxx is sold" to the entire list... you offered it for sale, and it is not considerate of list resources (which include the time and energy of the other list members) to burden the list with these senseless notices. Use direct email to those who responded, or, if you don't want to answer them personally, just don't use the list to advertise them for sale!

- 3) AVOID even the mere faint appearance that you are posting items for sale as a regular adjunct to your business dealings. This has become more of a problem lately with some long lists showing up regularly on the main list, or with dealers who appear to be using the list for their personal advertising advantage. Failure to observe these basics \*will\* result in banishment from the list -- just don't do it! When even a shadow of doubt creeps in, read the "Welcome" message again... it spells it out!
- 4) DO be considerate of those on the list in your for sale or wanted postings. Keep them short, infrequent, and ONLY include items specifically appropriate to the list -- NO solid state gear is obvious, but try to avoid pushing the envelope in any area.
- 5) LONG lists and estate offerings should be sent to me at:  
listown@jackatak.theporch.com  
so they may be uploaded to the archives for email, web, or ftp retrieval.
- 6) We now have a web page up. Go to:  
<http://www.theporch.com>  
and follow the "ListProc Web Interface" Link to get registered and use the web interface, which allows searching of previous articles and the archived text files.

Thanks for your understanding and help in making the boatanchors list have the highest signal to noise on the InterNet.

--

73

Jack, W4KH/Mobile - - - BoatAnchor Mailing List Owner - - -  
listown@jackatak.theporch.com - "Plus ca change, plus c'est la meme chose"  
"Il n'y a que les idiots qui ne changent jamais d'idee"  
Sun Oct 1 11:15:01 CDT 2000

-----  
Message-ID: <002201c02bd7\$978c6f20\$59bc69ce@tsunami2>  
From: "Ed White" <wa3bzt@wserv.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Cc: "Rambo Doug KA3KHZ" <drambo@wserv.com>  
Subject: For Sale  
Date: Sun, 1 Oct 2000 14:44:10 -0400  
MIME-Version: 1.0  
Content-Type: text/plain;  
charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

I have the following two items for sale make a reasonable offer please.

1. Western Electric Amplifier (audio)

Fair condition in storage some rust / paint damage.  
as is condition

## 2. PE-88-a Generator

Model 358-ARS-2

M.P.F. Feb 45

ONAN 350W

used has the usual heat damage to paint has some rust  
as is condition

Would like pick up only items are heavy.

Ed white

WA3BZT Delaware

wa3bzt@wserv.com

-----  
From: "Jim Reynolds" <ki6up@earthlink.net>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: Military Multimeter ME 9 H/U  
Date: Sun, 1 Oct 2000 18:43:12 -0500  
Message-ID: <000101c02c01\$5c43a3a0\$5c4afc9e@ripcord>  
MIME-Version: 1.0  
Content-Type: text/plain;  
        charset="iso-8859-1"  
Content-Transfer-Encoding: 7bit

Here is one for you guys...

I had a guy give me a military volt meter in a trade. He had put it up with the batteries in the compartment and they leaked and corroded the compartment badly. The instrument is a

Multimeter ME 9 H/U and on top of the unit - for the 5000 volt range is a Multiplier Kit MX-815 B/U.

It says it uses 3-BA-31's and 1-BA-30. I am thinking about making a wall adapter supply the correct voltage to the unit - but I need to know what the total voltage of the batteries equal as I have never used any BA-31 Batteries. If I remember correctly, a BA-30 is a flashlight battery at 1.5VDC. If the Batteries are easy to find, could some one advise?

Is there any hope of finding a manual on this gear?

Thanks Guys and 73

Jim Reynolds

KI6UP

-----  
From: Andy Wallace <wallace@world.std.com>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: (fwd) RU-17 coil set Range E CASE only, \$10 shipped  
Date: Sun, 01 Oct 2000 20:31:59 -0400  
Message-ID: <lnhftsgauaqng3602pjd0vgs8bdku3n7lv@4ax.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit

FYI, this is still available:

Just found it at a flea today, okay shape (dusty), EMPTY, no coil inside. Doubt I'll ever have the RU-17 fighter radio nor the aircraft, yours for \$10 shipped. Western Electric, 1941 contract.

--Andy  
wallace@world.std.com

-----  
From: KB9VU@aol.com  
Message-ID: <25.b7b530d.2709d26e@aol.com>  
Date: Mon, 2 Oct 2000 07:58:38 EDT  
Subject: FS: R390A  
To: Old Tube Radios <boatanchors@theporch.com>  
MIME-Version: 1.0  
Content-Type: text/plain; charset="US-ASCII"  
Content-Transfer-Encoding: 7bit

Collins 1954 contract R-390A with NOS CY-979A/URR cabinet and manuals. Radio is in good condition and works on all bands. Panel is good with scratches around the rack mount holes and the panel edges. Meters installed. All knobs are there and original. Includes top and bottom covers and the internal slug rack cover. Cabinet is NOS painted gray with shock mounts installed.

Due to the size and weight, I would not want to ship the radio. Pick up near St. Louis, MO or would drive a reasonable distance to exchange.

Radio, top/bottom covers, manuals and cabinet \$675 Firm. Radio, top/bottom covers and manuals, without the cabinet: \$450 Firm.

Mike, KB9VU  
kb9vu@aol.com

-----  
Message-Id: <3.0.1.32.20001002110725.00814700@pop.mindspring.com>  
Date: Mon, 02 Oct 2000 11:07:25 -0400  
To: Old Tube Radios <boatanchors@theporch.com>  
From: Bob Login <jlogin@mindspring.com>  
Subject: WTB Mod & Driver xfmrs  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"

Hi...Trying to put an old Navy TBW on the air. Have the pwr supply nearly complete but no luck on finding the iron for the modulator. I think an ART-13 should have what I need. Anyone have a junker who is willing to part with it or sell me the speech amp and modulator stuff? Or possibly you have other stuff that would also work. The TBW runs an 803 in the final. Tnx and 73 Bob, AA8A

-----  
Message-Id: <4.2.2.20001002111756.00a901b0@mail.sover.net>  
Date: Mon, 02 Oct 2000 11:20:32 -0400  
To: Old Tube Radios <boatanchors@theporch.com>  
From: Michael Crestohl <mc@sover.net>  
Subject: Re: Forward from BoatAnchors: "Rainchester" October 6 & 7th, 2000.  
Cc: boatanchors@listserv.tempe.gov, boatanchors@theporch.com  
Mime-Version: 1.0  
Content-Type: text/plain; charset="us-ascii"; format=flowed

Hosstraders (Rochester NH) is October 6th (Friday) and October 7th (Saturday). It ends after the prize drawings at 1:00 PM Saturday.

As always.

C U There???

73,

Michael

At 11:15 AM 10/2/2000 -0400, McDonald, Marll wrote:  
>October 7th (Saturday) and October 8th (Sunday) -- really?  
>It's always been on a Friday/Saturday.  
>  
>Please double-check and let us BoatAnchorites know whether it's the  
>7th/8th or 6th/7th.  
>  
> > "Must be having a pre-senior moment...is "Deerchester", next weekend??"



> > Yes! Actually Friday, Saturday, and Sunday.

-----  
Date: Mon, 2 Oct 2000 15:33:47 -0400 (EDT)  
Message-Id: <200010021933.e92JXln04663@ecunet.org>  
To: Old Tube Radios <boatanchors@theporch.com>  
Subject: GATHERING OF SX-42 MUSINGS  
From: JOHN.SEHRING@ecunet.org

To: boatanchors@theporch.com

> From: Leslie Zwiebel <wb6orz@pacbell.net>  
>  
> The audio is amazing, beautiful, and terrific.

Wow, what more can I say?  
-----

> From: Mike Souhrada <wb9iog@revealed.net>  
>  
> I have two units one sort of works the other was not very pretty. The  
> only reason I kept them was because of the huge coverage of the SW bands  
> and FM capability. It is a very unusual design.

Indeed. Maybe too unusual!

> Didn't want to be negative but its the all time worse unit to work on  
> I've ever had , read many. All the caps are paper and some are almost  
> impossible to get to. Specifically those tied to the band switch. I  
> didn't pay much for both and they will likely sit on my floor for many  
> more years.

Oh well. I've read A.B. Bond's saga with the bandswitch on a web site,  
sound's like brain surgery.

> Unless you are a glutton for punishment forget it. There are many  
> interesting units from Hallicrafters , Hammarlund etc that are worth the  
> time and effort to restore. Frankly of the two brands I found Hammarlund  
> the better made unit in my book. I always felt Hallicrafters cut too  
> many corners, your analysis seems to support that.

I have had good luck with later Halli's, SX-96, -100, -101 & -101A. Very  
rugged physically & electrically, no trouble at all, even after extremely  
rough shipping treatment. The SX-100 was dropped on a corner so hard it  
collapsed the front panel a bit but worked right out of the box since then  
(15 years), amazing!

> You are on the beam. Forget it, it might be useful for others that need

> parts.

I will have to take a very close look at radio out of cabinet.

-----

> From: Allan Culbert <Allan-Culbert@uiowa.edu>

>

> Something like 40 years ago I had the opportunity to use one for awhile.

> Had great audio, but I just didn't think it was of the same cut as the

> SX-28 series.

Always thought I wanted a -28. Very cool looking. Neighbor of mine when I was a kid had one, used it on 11 m CB with a converter.

> I did own the little brother, the SX-43 and it shared only some of the

> weird circuit used to cover broadcast FM band and 6 meters and it was a

> pain.

Yes, less expensive, smaller chassis I believe, same era.

> For my money, I would opt for an HRO or Hammarlund before I would dive  
> into either a SX-42 or 43.

>

> Just my two cents worth of course.

Worth way more than 2 cents! -----

> From: jackiv@juno.com

> HI John, I think that at that time They were looking at the

> entertainment market, not a critical communications market. It was rough

> out there with all of the contenders for the buck.

But schizophrenic!

> > 4. Loctal tubes--phooey, Sylvania's costly post-WWII mistake!

> > Guess they

> > didn't know miniature tubes were on the way.

>

> Here we must differ--the loctal with its short leads and having the

> 7F8 dual triode was about as good as it got then. If you wish to

> critique that stage, replace the bypass caps under the chassis- what a

> xxxxx..

I stand corrected on loctals!

> > 5. Combined AM/FM IF stages, 455 kHz/10.7 MHz. This is usually

> > found

> > only in cheapie receivers. Makes IF stages very complex. Probably

> > some  
> > performance compromises.  
> Yes I agree especially the supplier of the dual I F cans and the  
> acidic wax that showed up on some of the coils. bad!

What did the acid do I wonder? And where did it come from?

-----  
> From: "A. B. Bonds" <ab@vuse.vanderbilt.edu>  
>  
> I've had a fair amount of experience with the SX-42, having rebuilt 3 of  
> them (and one more sits in the "todo" pile). I have a few comments on  
> your not inaccurate analysis. There are a number of sizable warts in  
> the design and its execution, but \_for its time\_ (late 40's design) this  
> was a pretty fine set.

But overly complex, wanted to be all things to all people?

> When properly rebuilt it is very hot, there is not too much problem with  
> overload (though some harmonics from loud FM stations show up in the  
> 40-50 MHz areas). Note that the second RF stage only kicks in at higher  
> frequencies.

Yes, I finally realized that. My schematic is small & fuzzy.

> The filters work very well (as Hue pointed out) and it is a delightful  
> band cruiser. The biggest advantage to my mind is the SOUND. Big, fat,  
> round. Push-pull 6V6's can move a lot of air, and the wide open spaces  
> of the broadest band are unequalled by few other sets (a DECIDED  
> improvement over the congested NC183D sound).

Yes, I found the -183D too selective (= muddy audio) even in the widest selectivity position for AM broadcast.

> Probably not so good for comms work (the BFO is typically Halli wobbly)  
> but great for kicking back and listening to Radio Istanbul and the like.  
> This same circuit was used for the SX-62, the famed "Gentleman's  
> Bandcruiser".

Is the -62 basically the same? Same maintenance problems?

> >3. Above-30 MHz coverage is useless. Adds a lot of complexity to  
> front >end. Too much emphasis on high sensitivity for that region at  
> possible >expense of overload performance at HF, see 1. Liable to be  
> relatively >insensitive & rather unstable.  
>  
> One of the sets I did had to have some parasitic stopping resistors put  
> in series with the RF plates (something like 100 ohms) to get rid of

> chirps in the 50 MHz area. These showed up after I replaced the very  
> bad wax caps. However, that set is now one of my favorites, quite  
> sensitive and stable above 30 MHz.

Good to remember.

> >4. Loctal tubes--phooey, Sylvania's costly post-WWII mistake! Guess  
> they >didn't know miniature tubes were on the way.  
> >  
> Well, if you gonna reject a set 'cuz it has loctals, nothing to be done  
> about it. They do work OK and are fairly cheap and available (since few  
> like them....). The only problematic one is the 7F8, which has a  
> tendency to get weak on one side only. Dunno why.

Circuit pushes that one too hard?

> >5. Combined AM/FM IF stages, 455 kHz/10.7 MHz. This is usually found  
> >only in cheapie receivers. Makes IF stages very complex. Probably  
> some >performance compromises.  
> >  
> Perhaps, but consider the vintage. As good as it got back then. The  
> high band performance of the SX-42 is miles better than that of the S-27  
> and S-36, which uses a very elegant front end and acorn tubes (but a ten  
> year older design).

Good to know.

> >6. Only half of dual diode 6H6 is used as combo AM detector, AGC &  
> ANL. >Other half is unused! Silly.  
> >  
> One of the original designs for the set (there were three distinct  
> versions) used all sections of both 6H6's. This abandonment of one  
> section occurred later in production. No telling which version the set  
> you are looking at is.

Will have to ck ct & serial #.

> >7. 6SL7 phase inverter to drive pp 6V6's is strange, the most  
> >unsymmetrical circuit I've ever seen. One 6V6 grid sees 1st stage, the  
> >other sees signal via 2nd stage.  
> >  
> Actually, quite common back then. Sound is nonetheless pretty good.

Others agree.

> >Have I talked myself out of this one?! Am I off the beam? What think  
> you?  
>

> If you want to get rx's for the pure technology, you shouldn't be  
> looking at Halli's anyway. I have often used the metaphor that they  
> were like Jaguars (cars) in that they offered pretty hot performance for  
> not so much money, requiring design and construction compromises. The  
> build quality, repairability and reliability were questionable at best  
> in most cases (except eg SX-73). For more esthetic circuitry, you can't  
> beat National or Collins, but if I had to get rid of my NC183D or my  
> SX-42, the National would go first. Why? As stated, the Halli has much  
> better sound, though it is not as sensitive nor does it have as clean a  
> front end (you can hear the music of the spheres from the National).  
> You also cannot beat the styling and the ergonomics of the  
> Halli--Raymond Loewy at his best.

Sensitivity is not an issue in HF receivers, IMO.

The set won a design award I believe.

> WARNING--WARNING--Despite my obvious enthusiasm for these anchors, I  
> have to be realistic about their restoration. It is nasty. Every wax  
> cap has to go, and about half a dozen of the leaky wax caps are in  
> nearly inaccessible places that require a good deal of creativity to get  
> to (without taking apart the bandswitch). I will be glad to supply  
> pointers as required. You will need to check EVERY resistor as well,  
> many are way off target. And since they run B+ through the bandswitch  
> (the second RF stage only kicks in at band three) you can have  
> carbonization and leakage in the switch. There is a whole volume on this  
> problem posted on Phil Nelson's capable website.

That's the whole key, whether the bypasses have been bad enuf for long enuf  
to cook the bandswitch.

> Also note the above comment that there were at least three versions of  
> the circuit, you have to get the right documentation for your set. I  
> have copies of all three if anyone needs something, but the prints are  
> difficult to read due to small features and excess copying. Count on at  
> least 20-30 hours of work to do a proper restoration.

> But you are in this for the entertainment value, right?

Of course, absolutely!!

-----  
> From: "Bob Duckworth" <wb4mnf@atl.org>  
>  
> All those quirks make it an interesting radio.  
> But, you've got to like wierd stuff.  
> IMHO, there are very few Halli pieces worth having  
> mainly because of the cheesy construction quality.

I haven't seen that but have owned the more expensive Halli's.

-----  
> From: "russ dworakowski" <wb3fau@hotmail.com>  
>  
> John, In good working condition, the 42 is a very  
> nice sounding rx Hi fi at that. It lacks in freq.  
> resolution and selectivity is OK not super. Some  
> say they are sensitive, I have found them to be  
> dogs. No it is not a SX-28. The NC-125 could be  
> a close match Russ  
-----

> From: Arden Allen <gumbear@pacbell.net>  
>  
> > Have I talked myself out of this one?! Am I off the beam? What think  
> you?  
>  
> Some cogent observations, some snap judgements perhaps? My SP-600 uses  
> two 6BA6 remote cutoffs for the RF amps. AM and FM, everything  
> including the kitchen sink too! What's wrong with a nice low noise 7F8  
> duo triode? Lotta radios used loctals, just needed a pry bar to get them  
> out. Look at it this way, what other radio holds more promise for  
> design improvements?

I don't think I'd dare!

-----  
> From: Henry van Cleef <vancleef@netcom.com>  
>  
> Overload doesn't occur in the RF preamp stages. Their main function  
> is to increase signal level before the converter, which is a noisy  
> stage, to improve noise figure.

Agreed that's the function of an RF stage (to set system noise figure)  
but I still believe that's where cross-mod & other mischief takes place. Else w  
hy was the 6DC6 developed  
(for minimal cross-mod) & used as RF amp in Collins & Halli's?

> The second stage is only "in" at the higher bands, and the real problem  
> with the circuit is the bandswitching of B+. The place where you need  
> effective AVC is the IF stages, particularly the last one.

But wouldn't that be a bit late in the chain, i.e. if overload takes place  
before then, there's no remedy for it?

> > Don't like freq spread of bands, lower ones are too wide, 2:1 is >

> > optimum for best tracking & Q (e.g. SP-600 Super Pro): 1.6-5, 5-15,  
> > 15-30, > 27-55, 55-108 MHz.

> Hammarlund played against the market by splitting the broadcast band,  
> which is 3:1. Others did not. Even RME used extra capacitance to get  
> 3:1 coverage on broadcast. See later comments on the market that  
> Hallicrafters was addressing with this set.

> > 3. Above-30 MHz coverage is useless. Adds a lot of complexity to  
> front > end. Too much emphasis on high sensitivity for that region at  
> possible > expense of overload performance at HF, see 1. Liable to be  
> relatively > insensitive & rather unstable.  
>  
> Your set may not be up to snuff. A 100% recap/reresistor is generally  
> needed. "Insensitive" and "overload" are mutually exclusive.

True, but I'm only looking at the schematic. Also, overload more important  
below 30 MHz, sensitivity more important above.

> > 4. Loctal tubes--phooey, Sylvania's costly post-WWII mistake! Guess  
> they > didn't know miniature tubes were on the way.  
> >  
> Post WWII? 1938 is their date, a decade earlier, and definitely pre  
> WWII. Unlike RCA's octal-base series, loctals run quite well up into  
> mid-VHF. RME used loctals after 1940, and their sets walk right out  
> through 10M very nicely. The fact that they aren't common doesn't  
> mean that they aren't very good tubes. Also keep in mind that when  
> the set was designed (1944-5), the miniature set did not include the  
> 9-pins (12A\*7 in particular). Also that loctals were more available  
> in the early postwar years.

Once again, I learn (about loctals). Yes, their construction is good for  
RF, metal pins in glass rather than plastic as with octals, presaging  
miniatures. I had no idea of their pre-WWII genesis.

> > 5. Combined AM/FM IF stages, 455 kHz/10.7 MHz. This is usually  
> found > only in cheapie receivers. Makes IF stages very complex.  
> Probably some > performance compromises.  
>  
> Running the IF coils in series is complex? The alternative is switching  
> all those circuits with a bandswitch, which I don't consider less  
> complex. Anyway, the unused coil of the halves is electrically  
> invisible at the other frequency.

But still, the requirements of AM & FM IF stages differ markedly.

With AM you absolutely need linearity at all signal levels to prevent  
amplitude envelope distortion. Stages must be amenable to AGC control.

With FM, you want flat out, maximum gain, linearity be damned. And no AGC is wanted.

The right way to go is separate AM & FM IF strips.

> > 6. Only half of  
> dual diode 6H6 is used as combo AM detector, AGC & ANL. > Other half is  
> unused! Silly.  
>  
> \$\$\$ engineering, Hallicrafters' trademark. I think in the original  
> version, the noise limiter circuit was separate.

Went backwards, later designs had unused half of 6H6.

> > 7. 6SL7 phase inverter to drive pp 6V6's is strange, the most >  
> unsymmetrical circuit I've ever seen. One 6V6 grid sees 1st stage, the  
> > other sees signal via 2nd stage.

> Well, to someone used to later paraphase amplifiers, the circuit does  
> seem a bit odd.

Yes, that's certainly me!

> But the important thing is that it works, and very well. Hallicrafters  
> used the same circuit in the SX-28 and S-27/36, and they are about the  
> best audio around, and actually match the high end Magnavoxes and  
> Farnsworth Capehart with a much less complex circuit.

Excellent, glad to know.

> > Have I talked myself out of this one?! Am I off the beam? What  
> think you?

> Brand Hallicrafters is Brand Hallicrafters. Bill Halligan hired top  
> engineers and paid them top dollar to come up with superb paper  
> designs. The execution in copper and metal is something  
> else-----Halligan made sure he gave a lot of bang for the buck. No  
> question that it is a much more cheaply built radio than the SX-28 and  
> S-27/36, which are interesting excursions by Hallicrafters into the  
> Hammarlund/National/RME realm that have their own weak points.

Reality of post-WWII market place pushed that I expect. I love my SX-100  
(ca 1957, design goes back to early 50's S-76), it's sensitive & selective  
but its mechanical stability, not to put too fine a point on it, sucks!  
Maybe I do want an SX-28.

> Also, do not forget that this is a high end home entertainment radio,



> not exclusively a "ham" or just plain "all-wave" set. Don't forget that  
> this is essentially an SX-28 follow-on with FM thrown in for free.

That's the key, "entertainment" & Lowey's involvement in it (& remember the  
around-1950 Studebaker, his too?). BTW, I think I've seen way more SX-42's  
in Hollywood films than any other.

> A comment on the broadcast FM capability: The SX-42, with 10.7 Mhz  
> IF, blows smoke around the S-27/36 above 85 Mhz. It also has enough  
> bandwidth to handle full 75 Mhz. FM deviation, which the 5250 Khz. IF  
> in the older design could not.

A very important point if set is to be used for FM broadcast.

> You're free to critique Hallicrafters' use of cheap coils and tuning  
> caps, less-than-rigid mechanical construction, madcap bandswitch layouts  
> with cheap switches, etc., but I think that when you critique  
> Hallicrafters for this, you are begging the question. If Tektronix had  
> built it, the circuits would have been quite similar, but the radio  
> would have cost on a par with Collins, not what Hallicrafters sold it  
> for.

A variant on the car mechanic's "Pay me now or pay me later."  
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Thanks for SUPER comments, I've learned a lot & hope you have too. I'm  
amazed not only at the collective wisdom of this list's members but  
their willingness to share that wisdom.

I'll keep you informed on the SX-42. If the price is right & condition ok, I may jump!

-John Sehring (Mon, Oct 2, 2000, Ipswich SD) UCC WB0EQ

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